

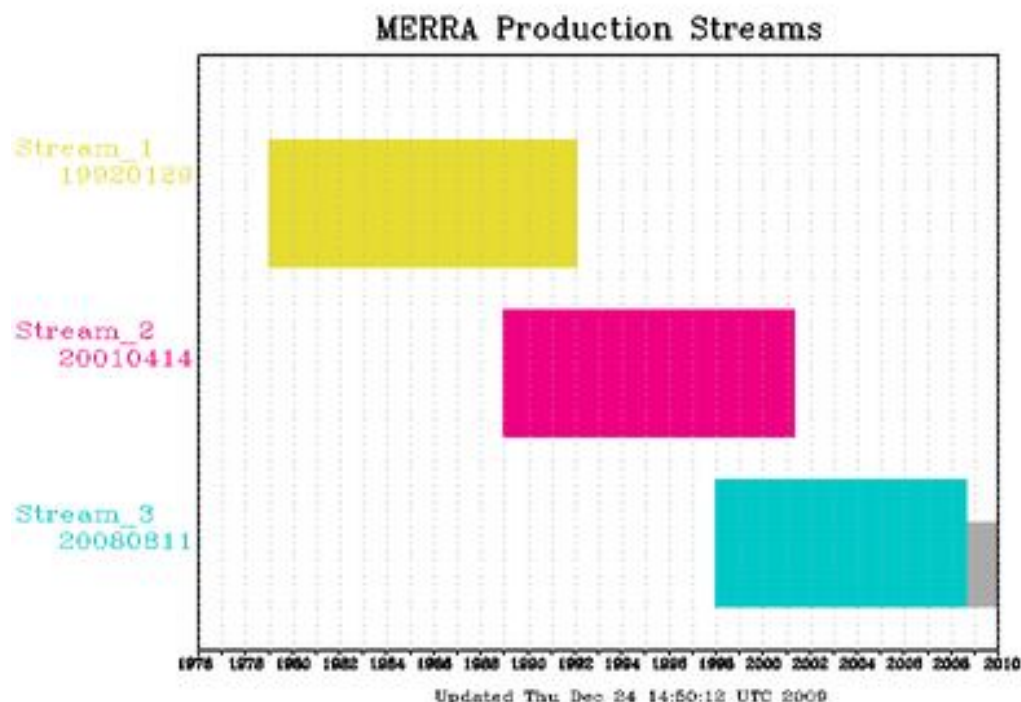
MERRA Mainstream and Spinup data

The original plan for MERRA production was to run in three streams, optimizing the computers processes. The original three streams were 1) 1979-1988, 2) 1989-1997 and 3) 1998-present. These were initialized with 2 years of coarse resolution analysis, followed by 1 year at the native (1/2 degree) resolution. Recently, streams 1 and 2 caught up to the beginning of the respective subsequent streams, connecting the time series. Streams 1 and 2 were continued providing overlapping data with the beginning of the next streams, in order to test the variance of the system and the viability of the initialization. At present, the first overlapping period is 4 years from 1989-1992 and the second overlap period is 3 years from 1998-2000.

We have been evaluating the initial conditions and the continued spinup of streams 2 and 3. In general in the meteorology, there are few differences between the overlapping data. In fluxes (such as precipitation), we do note a small difference at the beginning which gets smaller in time. The differences would not likely affect any scientific results. Slightly larger differences can be seen in slowly varying states, such as the root zone wetness.

At present we are documenting these differences and will provide a report on the overlapping period. In the mean time, this note is provided to users to alert them that we will be changing the transition times of the streams to utilize the additional data produced at the ends of stream 1 and 2. This does not invalidate the data currently available, but is considered only a minor scientific revision. Once the data is provided to the DAAC and prepared for user access, the new streams and transitions will be as follows:

- Stream 1 1979-1992
- Stream 2 1993-2000
- Stream 3 2001-present



Connecting these streams will be presented to users as the primary MERRA data, or the “mainstream” data. Access to Stream 2 1989-1991 and Stream 3 1998-2000 data will still be provided, but the data will be considered secondary and called “spinup” data. This will effectively increase the spinup period for Streams 2 and 3 to 4 years of native resolution analysis.

We anticipate the transition from the original streams to this extended spinup configuration to occur in February 2010, nearly coincident with Stream 3 catching up to real time. Regular updates on this will be made as they become available.